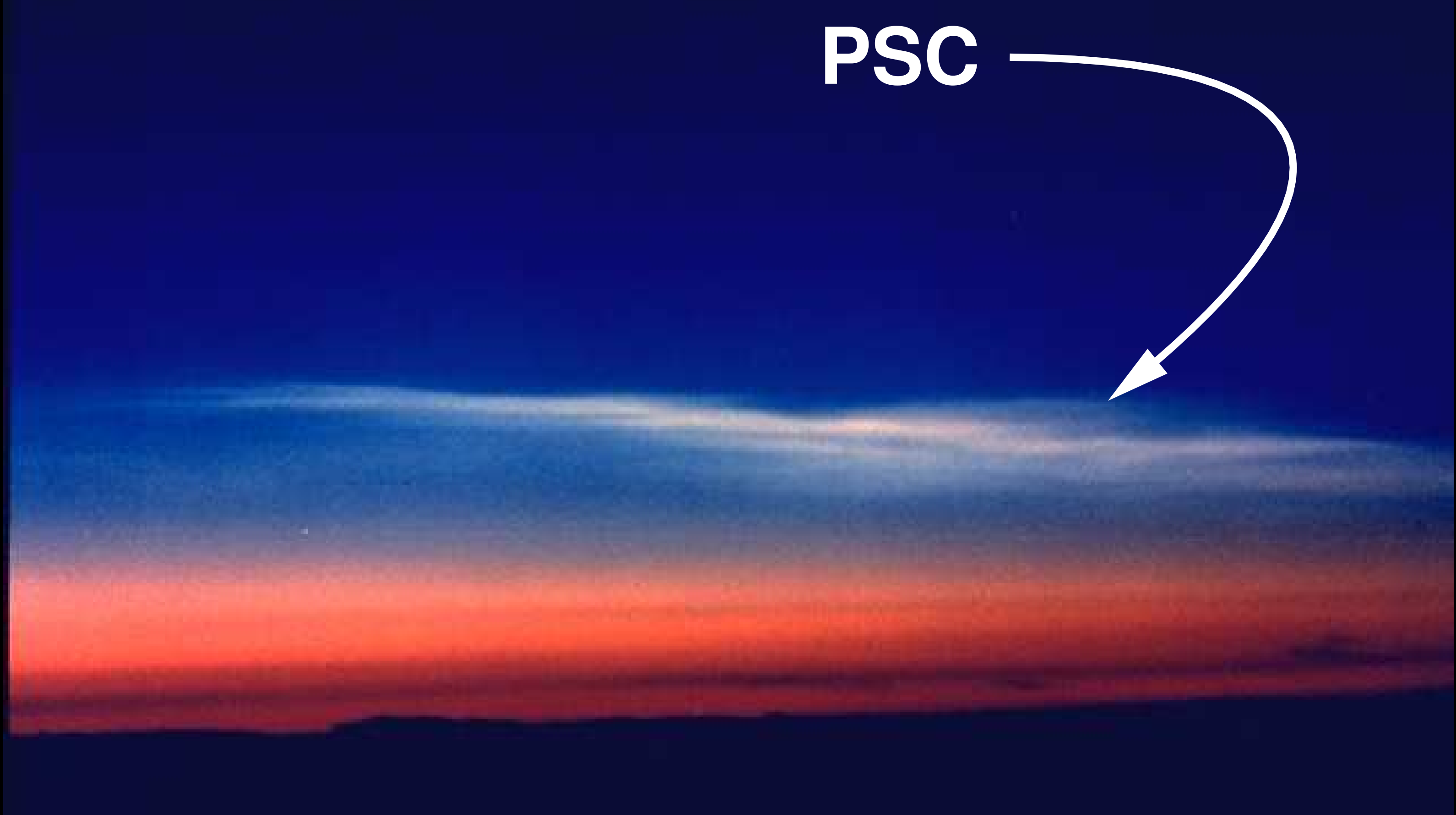
Polar Stratospheric Clouds

Type I PSC:	Nitric acid trihydrate (HNO_3–3•H_2O) Ternary solution (H_2O, H_2SO_4, HNO_3)
Formation Temp:	195 K
Particle diameter:	1μm
Altitudes:	10–24 km
Settling rates:	1km/30 days

Type II PSC:	Water Ice
Formation Temp:	188 K
Particle diameter:	> 10 μm
Altitudes:	10–24 km
Settling rates:	> 1.5 km/day



Heterogeneous reactions take place on PSCs, releasing chlorine from reservoir species (HCl and $ClONO_2$) into reactive forms (ClO) that can rapidly destroy ozone.

PSC over North Atlantic, January 1989, taken from the NASA DC–8 by O. B. Toon